EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	113	(PAMAM or POPAM) and therapeutic agent	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 15:54
S2	113	(PAMAM or POPAM) and therapeutic agent and dendrimer	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 15:58
S3	3	acetylated adj (PAMAM or POPAM) and therapeutic agent and dendrimer	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 15:55
S4	8	(generation "5" or G5) adj (PAMAM or POPAM) and therapeutic agent and dendrimer	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 16:21
S5	3	(methoxy or acetyl) and (generation "5" or G5) adj (PAMAM or POPAM) and therapeutic agent and dendrimer	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 16:54
S6	0	acetyl? and (PAMAM or POPAM) and therapeutic agent and dendrimer	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 16:36
S7	7	acetyl??? and (PAMAM or POPAM) and therapeutic agent and dendrimer	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 16:47
S8	15	acetyl???? and (PAMAM or POPAM) and therapeutic agent and dendrimer	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 17:12

EAST Search History

S9	0	acetyl???? and (generation "5" or G5) adj (PAMAM or POPAM) and therapeutic agent and dendrimer	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 16:55
S10	2	acetyl???? and (generation "5" or G5) and (PAMAM or POPAM) and therapeutic agent and dendrimer	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 16:55
S11	0	(acetyl???? and (PAMAM or POPAM) and therapeutic agent and dendrimer) @py<="2001"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 17:00
S12	0	(acetyl???? and (PAMAM or POPAM) and therapeutic agent and dendrimer) @ay<="2001"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 17:00
S13	0	acetyl???? and (PAMAM or POPAM) and therapeutic agent and dendrimer @ay<="2001"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 17:01
S14	0	(acetyl???? and (PAMAM or POPAM) and therapeutic agent and dendrimer) @ay<="2001"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 17:01
S15	0	(acetyl???? and (PAMAM or POPAM) and therapeutic agent and dendrimer) @py<="2001"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 17:01
S16	3	"5919442" and baker	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 17:10

EAST Search History

S17	15	(acetyl???? or ethanoyl????) and (PAMAM or POPAM) and therapeutic agent and dendrimer	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/16 17:12
S18	0	WO 97/38134 WO 98/3394 I WO 99/07724 PCT/US90/02545 WO 99/02651	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/19 11:43
S19	0	WO 97/38134 WO 98/3394 I WO 99/07724 PCT/US90/02545 WO 99/02651WO 99/61662 WO 97/07398 WO 01/02861 EP "0" "271" "180"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/19 11:43
S20	0	WO 97/38134 WO 98/3394 I WO 99/07724 PCT/US90/02545 WO 99/02651 WO 99/61662 WO 97/07398 WO 01/02861 EP "0" "271" "180"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/19 11:44
S21	0	WO 97/38134 WO 98/3394 I WO 99/07724 PCT/US90/02545 WO 99/02651 WO 97/07398 WO 01/02861 EP "0" "271" "180"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/19 11:50
S22	2	WO 99/61662	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/19 11:45

EAST Search History

S23	30	US-5843089-$.DID. OR US-5800519-$.DID. OR US-5800508-$.DID. OR US-5800391-$.DID. OR US-5354308-$.DID. OR US-5755722-$.DID. OR US-5733303-$.DID. OR US-5857998-$.DID. OR US-5843003-$.DID. OR US-5933145-$.DID. OR US-5892020-$.DID. OR US-5892019-$.DID. OR US-5512443-$.DID. OR US-5693763-$.DID. OR US-5545530-$.DID. OR US-5808005-$.DID. OR US-4708930-$.DID. OR US-4743543-$.DID. OR US-4921789-$.DID. OR US-4921790-$.DID. OR US-5110911-$.DID. OR US-5855866-$.DID. OR US-4963484-$.DID. OR US-5053489-$.DID. OR US-4939240-$.DID. OR US-4918164-$.DID. OR US-4914021-$.DID. OR US-4892935-$.DID. OR US-5475096-$.DID. OR US-5270163-$.DID. OR US-5714166-$.DID.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/10/19 11:49
S24	15	WO 97/38134	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/19 11:53

EAST Search History

S25	33	US-4507466-$.DID. OR US-4558120-$.DID. OR US-4568737-$.DID. OR US-4587329-$.DID. OR US-4631337-$.DID. OR US-4694064-$.DID. OR US-4713975-$.DID. OR US-4737550-$.DID. OR US-4857599-$.DID. OR US-4871779-$.DID. OR US-5338532-$.DID. OR US-5387617-$.DID. OR US-5393797-$.DID. OR US-5393795-$.DID. OR US-5527524-$.DID. OR US-5560929-$.DID. OR US-5773527-$.DID. OR US-5631329-$.DID. OR US-5902863-$.DID. OR US-5795582-$.DID. OR US-5898005-$.DID. OR US-5861319-$.DID. OR US-5661025-$.DID. OR US-4946778-$.DID. OR US-5935114-$.DID. OR US-5908413-$.DID. OR US-5792105-$.DID. OR US-5693014-$.DID. OR US-5674192-$.DID. OR US-5876445-$.DID. OR US-5913894-$.DID. OR US-5868719-$.DID. OR US-5851228-$.DID.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/10/19 11:53
S26	32266	acetylation or acetylated near dendrimer	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/20 11:43
S27	0	S26 @py>="2002"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/20 11:44
S28	0	S26 @py<="2002"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/20 11:35
S29	26209	acetylation or acetylated near dendrimer	US-PGPUB; USPAT	ADJ	ON	2006/10/20 11:43

EAST Search History

S30	0	S29 @py>="2002"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2006/10/20 11:44
S31	0	S29 @py>="2002"	US-PGPUB; USPAT	ADJ	ON	2006/10/20 12:03
S32	16606	S29 and @py>="2002"	US-PGPUB; USPAT	ADJ	ON	2006/10/20 12:04
S33	12260	S29 and @py<="2002"	US-PGPUB; USPAT	ADJ	ON	2006/10/20 12:06
S34	584	S32 and POPAM or PAMAM	US-PGPUB; USPAT	ADJ	ON	2006/10/20 12:05
S35	584	S33 and POPAM or PAMAM	US-PGPUB; USPAT	ADJ	ON	2006/10/20 12:05

6/9/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0011098974 BIOSIS NO.: 199799733034
The interaction of plasmid DNA with polyamidoamine dendrimers: Mechanism of complex formation and analysis of alterations induced in nuclease sensitivity and transcriptional activity of the complexed DNA
AUTHOR: Bielinska Anna U; Kukowska-Latallo Jolanta F; Baker James R Jr
AUTHOR ADDRESS: Dep. Internal Med., Univ. Mich. Med. Sch., Ann Arbor, MI 48109-0666, USA**USA
JOURNAL: Biochimica et Biophysica Acta 1353 (2): p180-190 1997 1997
ISSN: 0006-3002
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The application of synthetic vectors for gene transfer has potential advantages over virus-based systems. However, little is known about the mechanisms involved in binding of synthetic materials to DNA and the nature of the DNA complexes that result from this interaction.

Polyamidoamine (**PAMAM**) dendrimers are unique polymers with defined spherical structure. Dendrimers bind DNA to form complexes that efficiently transfect cells in vitro. We examined the formation of DNA/ **dendrimer** complexes and found it based entirely on charge interaction.

Electronmicroscopic examination of the complexes indicated that the majority of the plasmid DNA is contracted into isolated toroids, but also revealed larger, irregular aggregates of polymer and DNA. The binding of plasmid DNA to **dendrimer** appears to alter the secondary and tertiary structure, but does not fragment the DNA or alter its primary structure.

Complexed DNA is protected against degradation by either specific nucleases or cellular extracts containing nuclease activity. While the initiation of transcription in vitro from promoters (for either T7 polymerase or eukaryotic RNA polymerase II) in **dendrimer** -complexed DNA is inhibited, elongation of the RNA transcript and translation do not appear to be affected. These resemble alterations of the DNA function when complexed with naturally-occurring polycations like non-**acetylated** histones. However, DNA complexed to **dendrimer** appears to maintain transcriptional activity while histone complexes at similar charge ratios do not. These results elucidate some aspects of the interaction between **PAMAM** dendritic polymers and DNA, and could lead to improvements in

the
  design of polymers or formation of DNA complexes that will increase
the
  efficiency of non-viral gene transfer.

REGISTRY NUMBERS: 9026-81-7: NUCLEASE
DESCRIPTORS:
  MAJOR CONCEPTS: Biochemistry and Molecular Biophysics; Genetics;
    Molecular Genetics--Biochemistry and Molecular Biophysics
  CHEMICALS & BIOCHEMICALS: NUCLEASE
  MISCELLANEOUS TERMS: COMPLEX FORMATION MECHANISM; COMPLEXED DNA;
    MOLECULAR GENETICS; NUCLEASE SENSITIVITY; PLASMID DNA-
POLYAMIDOAMINE
    DENDRIMER INTERACTION; TRANSCRIPTIONAL ACTIVITY
CONCEPT CODES:
  03502 Genetics - General
  10060 Biochemistry studies - General
  10062 Biochemistry studies - Nucleic acids, purines and pyrimidines
  10300 Replication, transcription, translation
  10506 Biophysics - Molecular properties and macromolecules
  10806 Enzymes - Chemical and physical

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Set	Items	Description
S1	1	DENDRIMER AND THERAPEUTIC AGENT
S2	72	ACETYLATED AND DENDRIMER
S3	3679	PAMAM OR POPAM
S4	44	S2 AND S3
S5	14	RD (unique items)
S6	1	S5 NOT PY>=2002
S7	276	FUNCTIONALIZED AND (POMAM OR PAMAM)
S8	8	S7 AND (THERAPEUTIC AGENT OR THERAPY OR CANCER FIGHTING)
S9	0	S8 NOT PY>=2002

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